

**IN THE CLAIMS:**

1           1.       (Original) A spacerless or geocomposite double bottom apparatus for a storage tank  
2       having a metal bottom and upwardly extending metal sidewalls, which apparatus comprises:  
3               a first lining layer of flexible plastic on top of said metal bottom;  
4               a plastic grid having a plurality of openings therethrough on top of said first lining  
5       layer;  
6               at least one layer of fiber insulation on top of said grid; and  
7               an upper metal bottom on top of said fiber material welded to said sidewalls.

1           2.       (Original) A double bottom apparatus as set forth in Claim 1 wherein said first lining  
2       layer is a high density polyethylene sheet.

1           3.       (Original) A double bottom apparatus as set forth in Claim 1 wherein said plastic grid  
2       is composed of high density polyethylene.

1           4.       (Original) A double bottom apparatus as set forth in Claim 1 wherein said fiber  
2       insulation is mechanically bonded mineral or glass wool.

1           5.       (Original) A double bottom apparatus as set forth in Claim 4 including two layers of  
2       said mechanically bonded mineral or glass wool.

1           6.       (Original) A double bottom apparatus as set forth in Claim 1 wherein said upper  
2 bottom extends through slots in said sidewalls and is welded thereto by welding to a flat bar  
3 extending from said sidewalls.

1           7.       (Original) A double bottom apparatus as set forth in Claim 6 wherein all welds are  
2 made from above said upper bottom.

1           8.       (Original) A double bottom apparatus as set forth in Claim 1 including a leak  
2 detection port through said sidewalls between said original bottom and said upper bottom.

1           9.       (Original) A double bottom apparatus as set forth in Claim 7 wherein said leak  
2 detection port includes a clear cylindrical tube so that fluid therein is visible.

1           10.      (Original) A double bottom apparatus as set forth in Claim 1 wherein a fluid tight  
2 containment space is created between said upper bottom, said sidewalls, and said first lining layer.

1           11.      (Original) A double bottom apparatus as set forth in Claim 10 wherein said fluid tight  
2 containment space is purged of oxygen.

1           12.      (Original) A double bottom apparatus as set forth in Claim 11 wherein said lining  
2 layer is fastened to said metal bottom by a plurality of fasteners.

1           13.    (Original) A double bottom apparatus for a storage tank as set forth in Claim 1  
2 including a sealant between said first lining and said sidewalls.

1           14.    (Withdrawn) A method of installing a spacerless double bottom for a storage tank  
2 having a metal bottom and upwardly extending sidewalls, which method comprises the steps of:  
3               installing a first lining layer of flexible plastic on top of said metal bottom;  
4               installing a plastic grid having a plurality of openings therethrough on top of said  
5 lining layer;  
6               installing at least one layer of fiber insulation on top of said grid; and  
7               installing a new upper metal bottom above said natural fiber material.

1           15.    (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth  
2 in Claim 14 including the additional step of affixing said lining layer to said metal bottom.

1           16.    (Withdrawn) A method of installing a spacerless double bottom apparatus as set  
2 forth in Claim 14 wherein said step of installing at least one layer of fiber insulation includes  
3 installing two layers of said fiber insulation.

1           17.    (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth  
2 in Claim 14 wherein said step of installing a new upper metal bottom includes the steps of cutting  
3 a plurality of openings through said sidewalls, inserting a plurality of flat plates in said tank and  
4 through said sidewalls, and welding said flat plates to said sidewalls.

1           18.     (Withdrawn) A method of installing a spacerless double bottom apparatus as set  
2     forth in Claim 17 wherein all welding is performed from above said flat plates.

1           19.     (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth  
2     in Claim 14 wherein said flat plates are welded to flat bars previously welded and extending from  
3     said sidewalls.

1           20.     (Withdrawn) A method of installing a spacerless double bottom apparatus as set  
2     forth in Claim 14 wherein said lining layer, said sidewalls and said upper bottom form a fluid-tight  
3     secondary container and including the additional step of purging said container of oxygen.

1           21.     (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth  
2     in Claim 14 including the additional step of installing a leak detection port through said sidewalls.

1           22.     (New) A spacerless or geocomposite double bottom apparatus for a storage tank  
2     having a metal bottom and upwardly extending metal sidewalls, which apparatus comprises:  
3                 a first lining layer of flexible plastic on top of said metal bottom;  
4                 a plastic grid having a plurality of openings therethrough on top of said first lining  
5     layer;  
6                 at least one layer of fiber insulation on top of said grid; and  
7                 an upper metal bottom on top of said fiber material extending through slots in said  
8     sidewalls and welded thereto by welding to a flat bar extending from said sidewalls.